Catalogue of American Amphibians and Reptiles.

BLANEY, RICHARD M. 1973. *Lampropeltis.*

Lampropeltis Fitzinger
Kingsnakes

Lampropeltis Fitzinger, 1843:25. Type species, *Herpetodryas getulus* Schlegel, by original designation.

Sphenophis Fitzinger, 1843:25. Type species, *Coronella coccinea* Schlegel = *Lampropeltis triangulum* (Lacépède), by original designation.

Ophibolus Baird and Girard, 1853:82. Type species, *Herpetodryas getulus* Schlegel, by original designation.

Osceola Baird and Girard, 1853:133. Type species, *Calamaria elapsoidea* Holbrook = *Lampropeltis triangulum* (Lacépède), by original designation.

Bellophis Lockington, 1876:52. Type species, *Coluber zonatus* Blainville.

Oreophis Dugès, 1897:284. Type species, *O. boulengeri* Dugès = *Lampropeltis mexicana* (Garman), by monotypy.

Triaenopholis Werner, 1924:50. Type species, *T. arenarius* Werner = *Lampropeltis getulus* (Linnaeus).

• CONTENT. Nine species are currently recognized, including two fossil species: *calligaster* (2 subspecies), *getulus* (7 subspecies), *intermedius* (fossil), *leonis*, *mexicana* (3 subspecies), *pyromelana* (4 subspecies), *similis* (fossil), *triangulum* (23 subspecies), and *zonata* (7 subspecies). These species fall into two natural groups, the Getulus group, comprised of *L. calligaster* and *L. getulus*, and the Triangulum group, which includes the remaining species (Blaney, 1971).

• DEFINITION. A genus of colubrid snakes in which the smooth, lanceolate dorsal scales are arranged in 17 to 27 rows, each scale having 2 apical pits. The head is indistinct or only slightly distinct from the neck. The eye is moderate in size with a round pupil. The nasal scale is divided. The ventrals are not angular, the anal plate is entire, and the subcaudals are normally divided. The tail is short. There are 12 to 20 maxillary teeth (none grooved), 12 to 18 dentary teeth, 8 to 14 palatine teeth, and 12 to 23 pterygoid teeth. The hemipenis is asymmetrically clavate or bilobed, calyculate apically, spinose on the lower distal half, naked or with minute spines on the basal half, and it has a single centrifugal sulcus spermaticus.

• DESCRIPTIONS. The only complete account of the genus was that of Blanchard (1921). *L. getulus* was reviewed by Blaney (1971), *L. mexicana* by Webb (1961), Gehlbach and McCoy (1965), Gehlbach (1967), and Tanzer (1970), *L. pyromelana* by Tanner (1953), *L. triangulum* by Williams (1970), and *L. zonata* by Zweifel (1952).

• ILLUSTRATIONS. Colored plates figuring *L. calligaster*, *getulus*, eastern *triangulum*, and *mexicana* appear in Conant (1958), and *L. getulus*, *pyromelana*, western *triangulum*, and *zonata* in Stebbins (1966). Pattern drawings of most species were provided by Blanchard (1921), and Blaney (1971) and Williams (1970) illustrated pattern variation in *getulus* and *triangulum*, respectively. Photographs of *mexicana* have been published by Webb (1961), Gehlbach and McCoy (1965), and Tanzer (1970). Drawings of the hemipenis of *calligaster* appeared in Blanchard (1921) and Dowling and Savage (1960), and Blaney (1971) provided photographs of the hemipenis of *getulus*.

• DISTRIBUTION. North America south of the 48th Parallel (southern Ontario and southwestern Quebec, west to southern Washington) southward to northwestern South America (Colombia, Ecuador, and into the Cordillera de la Costa of Venezuela).

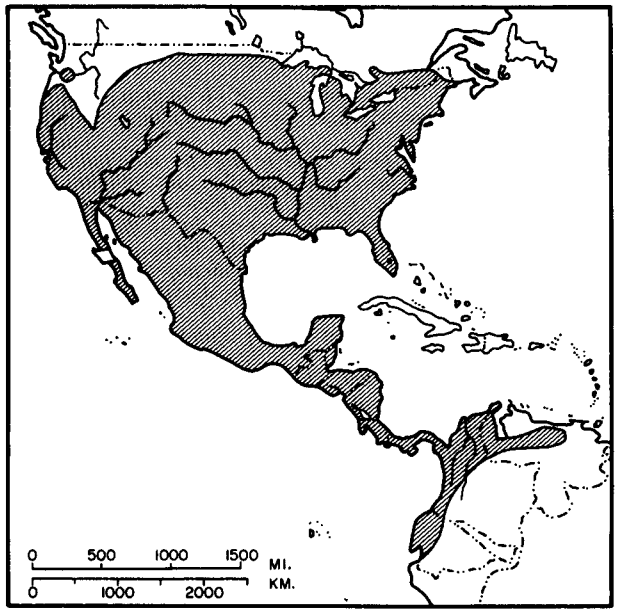
• FOSSIL RECORD. Holman (1968) reported 5 precaudal vertebrae of a *Lampropeltis* (unidentified as to species, but thought to be a member of the Triangulum group) from an Upper Pliocene site in Twin Falls County, Idaho. Other records of the genus appear in the Pliocene of Nebraska, Kansas, Oklahoma, and Michoacán, Mexico (Brattstrom, 1955, 1967; Holman, 1964b). *L. intermedius* was described by Brattstrom (1955) from the Upper Pliocene of Morelia, Michoacán, Mexico, and the lower Pleistocene of Cochise County, Arizona. Holman (1964b) described *L. similis* from the Mio-Pliocene of Brown County, Nebraska, and stated that this form may be ancestral to *L. intermedius*; both fossil species are related to the Triangulum group of kingsnakes. *L. calligaster* is represented in the Pleistocene of Kansas (Brattstrom, 1967) and possibly in Arkansas (Dowling, 1958). *L. getulus* has been recorded from California (Brattstrom, 1953b, c), Florida (Auffenberg, 1963; Brattstrom, 1953a; Gehlbach, 1965; Holman, 1958), Nebraska (Holman, 1964b), Nevada (Brattstrom, 1954), and Texas (Holman, 1964b). *L. pyromelana* was reported from the Pleistocene of Nevada by Brattstrom (1954). *L. triangulum* has been found in the Pleistocene of Arkansas (Dowling, 1958), Florida (Auffenberg, 1963), Georgia (Holman, 1967), Kansas (Brattstrom, 1967), Missouri (Holman, 1965), Oklahoma (Brattstrom, 1967), Texas (Brattstrom, 1967; Holman, 1963, 1964b, 1966, 1969), and Virginia (Guidry, 1962).

• PERTINENT LITERATURE. Blanchard (1921), Blaney (1971), and Webb (1961) discussed evolution within the genus, and Blanchard (1921), Blaney (1971), Tanner (1953), Webb (1961), Williams (1970), and Zweifel (1952) presented specific and infraspecific phylogenies. Gehlbach (1967) provided a summary of *L. mexicana*. Tanzer (1970) discussed polymorphism in *L. mexicana* and provided evidence that *L. m. blairi* is a polymorphic phase of *L. m. alterna*, suggesting that *L. m. thayeri* also might be the *blairi* phase of *L. m. alterna*. He further suggested that *L. leonis* could be a polymorph of *L. mexicana*. Smith, Lynch, and Browne (1965) presented evidence for the supression of the name *Coluber doliatus* in favor of *L. triangulum*, and Burt (1936) discussed the nomenclature of *L. zonata* versus *L. multicincta*. The natural history of *L. mexicana* was discussed by Tanzer (1970), that of the genus and individual species by Conant (1958), Stebbins (1966), and Wright and Wright (1957).

• ETYMOLOGY. The name *Lampropeltis* is derived from a combination of the Greek words *lampros*, meaning shiny, and *pelta*, shield.

• REMARKS. *Lampropeltis* is closely allied to the group of colubrine genera that includes *Elaphe*, *Pituophis*, *Cemophora*, and *Arizona* (Blaney, 1971; Dowling, 1951; Underwood, 1967; Williams and Wilson, 1967).

The validity of *Lampropeltis leonis* (Günther), known only from the original description (holotype lost), is highly questionable. It is not possible to distinguish *L. leonis* from *L. mexicana* and Tanzer (1970) has implied that they be considered synonyms, a suggestion with which I concur.



MAP 1. Geographic distribution of the genus *Lampropeltis*.

• KEY TO THE SPECIES OF *LAMPROPELTIS*. Numbers in parentheses after the names indicate the account numbers in this catalogue.

1. Last two maxillary teeth usually not longer and stouter than the preceding ones 2
   Last two maxillary teeth usually longer and stouter than the preceding ones 3
2. Dorsal pattern consisting primarily of a dark ground color with light crossbands, longitudinal stripes, or spots on at least the lateral scales; hemipenis moderately or deeply bilobed ..... *getulus* (151)
   Dorsal pattern consisting primarily of a light to dark brown ground color with darker dorsal and lateral blotches; hemipenis only slightly and asymmetrically bilobed ..... *calligaster* (152)
3. Dorsal pattern consisting of white-bordered gray bands or blotches alternating with black-bordered reddish orange dorsal markings ..... *mexicana* (55)
   Dorsal pattern not as above 4
4. Dorsal pattern of black-red-black triad annuli separated by more than 40 (body + tail) white annuli; top of head black, snout uniformly white ..... *pyromelana*
   Dorsal pattern of annuli or dorsal blotches, usually fewer than 40 (body + tail) white annuli, or if more, with snout black 5
5. Dorsal pattern of black and white annuli, white annuli more than 30, sometimes with red dividing black annuli into two; snout black ..... *zonata*
   Dorsal pattern of brown, gray, or red dorsal blotches, or red, black, and yellow or white annuli or dorsal bands, white or yellow annuli fewer than 30 ..... *triangulum*

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